

Applicant : Philip C. Georgeau et al.  
Appln. No. : 10/726,341  
Page : : 2

on any other group, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Furthermore, “ ‘Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.’” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)). Also, “[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR* at 1741. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444, *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788.

With respect to independent claims 1 and 5, Applicant respectfully asserts that there would be no reason to modify Zenor '006 or Venable '812 to include a moisture curing silyl-terminated polymer adhesive. In *ex parte cinader, Jr.* 2006 WL 2949317 (Bd.Pat.App. & Interf. 2006) (unpublished), The Board, in ruling on an obviousness issue involving substitution of adhesives, stated that “In the first of these rejections, the examiner specifically concedes that Randklev shows use of one part adhesive and does not show the use of first and second parts of a two-part adhesive (answer, page 6). The Examiner looks to Sondhi to supply this deficiency, urging that it would have been obvious to one of ordinary skill in the art to modify Randklev “to include the use of a two-part adhesive as shown by Sondhi in order to make use of known alternatives for adhesively bonding brackets to teeth”(final rejection, pages 6-7). We find nothing in the combined teachings of Randklev and Sondhi which would have led to the particular modification in Randklev urged by the examiner.” *Id.* at 3.

Although the cinader decision was prior to the KSR decision (*supra*), the Court of Appeals for the Federal Circuit has recently affirmed that the teaching, suggestion, motivation (TSM) test has not been eliminated, stating that “As this court has explained, however, a flexible TSM test remains the primary guarantor against a non-statutory hindsight analysis such

as occurred in this case. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed.Cir.2007) ("[A]s the Supreme Court suggests, a flexible approach to the TSM test prevents hindsight and focuses on evidence before the time of invention"). The TSM test, flexibly applied, merely assures that the obviousness test proceeds on the basis of evidence-teachings, suggestions (a tellingly broad term), or motivations (an equally broad term)-that arise before the time of invention as the statute requires." *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Laboratories, Inc.* 520 F.3d 1358, 1364 86 U.S.P.Q.2d 1196 (Fed. Cir. 2008) In the Ortho-McNeil case, the court also distinguished KSR's statement that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." stating that "The passage above in KSR posits a situation with a finite, and in the context of the art, small or easily traversed, number of options that would convince an ordinarily skilled artisan of obviousness." *Ortho-McNeil* at 1364.

Zenor '006 discloses a method "for patching single ply roof membrane derived from chlorosulfonated polyethylene by using a procedure involving N-methyl-2-pyrrolidone or NMP chemical liquid activator with proper steps therebetween and subsequently completing the patching method by following standard known welding procedures." (Abstract of Zenor '006). At column 3, line 49 - column 4, line 15, Zenor '006 discloses using a scrubbing pad 20 saturated with NMP activator chemical, wiping a coating of NMP activator chemical 24 onto a cleaned surface 26, following by hot-air welding "in a known manner following standard welding procedures."

Venable '812 discloses "a polyurethane foam system design for bonding the described membrane to acceptable substrates. The diisocyanate and polyol components are mixed in gun 16 in an approximately 1:1 volumetric ratio." (column 4, lines 15-19)

Georgeau '924 discloses a one-part pourable sealant including a silyl-terminated polymer that is "useful in a method of forming a seal around a roof penetration." (Abstract of Georgeau et al. '924). Applicant has also filed herewith an Information Disclosure Statement

Applicant : Philip C. Georgeau et al.  
Appln. No. : 10/726,341  
Page : : 4

(IDS) including information concerning a prior art M-1 structural adhesive/sealant comprising a silyl-terminated polyether. (see e.g. Exhibit A, page 2). The M-1 structural adhesive/sealant has a viscosity of 800,000 + cPs Brookfield RVF, TF spindle, 4 RPM, 70°F. (Exhibit A, page 2)

However, the prior art actually teaches away from the use of a roof structure including a moisture curing silyl-terminated polymer adhesive as recited in amended claims 1 and 5. Specifically, Venable '812 states that "it is very difficult to properly bond the EPDM rubber directly with an adhesive" (column 1, lines 39-40), and states that "the present invention overcomes the problems outlined above and provides a ... membrane [that] includes a sheet of flexible material (e.g. EPDM rubber) having a fleece-like matting secured to the underside thereof. It has been found that the use of matting permits the membrane to be strongly adhered to the adhesive ... the matting makes it possible to fabricate the restructure with a vapor venting spacing between the adhesive material and a flexible membrane sheet." (column 1, lines 47-60). Thus, Venable '812 teaches a foam, cellular adhesive and membrane with "fleet-like matting" to provide "vapor venting spacing". As discussed above, Zenor '006 teaches an NMP chemical liquid activator and hot-air welding for patching a roof. Georgeau '924 teaches a pourable sealant for forming a seal around a roof penetration.

Thus, the prior art does not provide a reason to provide the arrangement of independent claims 1 and 5. Applicant respectfully asserts that there is a very large number of adhesives that could be tried, and there would be no reason to expect one skilled in the art to select the precise arrangement of claims 1 and 5, especially in view of the actual teachings of other adhesives by Venable '812 and Zenor '006. Applicant reiterates that "a patent composed of several elements is not proven obvious merely by demonstrating that each of its elements was, independently, known in the prior art." KSR at 1741.

Claims 2-4 depend from claim 1, and claims 6-7 depend from independent claim 5, such that these claims are believed to be allowable for those reasons set forth above in connection with independent claims 1 and 5, respectively.

Applicant : Philip C. Georgeau et al.  
Appln. No. : 10/726,341  
Page : : 5

With respect to the rejection of claims 8-14, 17-22, and 26 as being obvious over Venable '812 in view of Georgeau '924, and further in view of Van Wagoner '723, Applicant respectfully asserts that the prior art itself does not provide any reason to select the precise features recited in these claims for combination in the precise manner recited in the pending claims, while ignoring the actual teachings of the prior art. As noted by the Court in the Ortho-McNeil case "Mylan's expert doctor Anderson, simply retraced the path of the inventor with hindsight, discounted the number and complexity of the alternatives and concluded that the invention of topiramate was obvious. Of course, this reasoning is always in-appropriate for an obviousness test based on the language of Title 35 that requires the analysis to examine "the subject matter as a whole" to ascertain if it "*would have been obvious at the time the invention was made.*" 35 U.S.C. §103(a) (Id. at 1364 (emphasis added in original)). Applicant respectfully asserts that there was an extremely large number of adhesives in existence at the time of the present invention, and the prior art does not provide a reason to select the precise arrangement of claims 8-14, 17-22, and 26, at least absent inappropriate hindsight. Applicant also reiterates that the prior art actually teaches use of other adhesives, not the moisture-curing adhesive of the subject claims.

Claim 27 depends from claim 21, and is therefore believed to be allowable for those reasons set forth above in connection with independent claim 21.

With respect to the rejection of claims 15-16 and 23-25 as being unpatentable over Venable '812 in view of Georgeau '924, Van Wagoner '723, and further in view of Beck '267, Applicant respectfully asserts that the prior art does not provide a reason to combine the references in the manner proposed. Given that there is not a small or easily traversed number of options, there is simply would be no reason to select the precise arrangement of these claims, at least absent inappropriate hindsight analysis. Again, the prior art actually teaches use of much different adhesives.

Applicants have made a concerted effort to place the present application in condition or allowance, and a notice to this effect is earnestly solicited. In the event there are any

Applicant : Philip C. Georgeau et al.  
Appln. No. : 10/726,341  
Page : : 6

remaining informalities, the courtesy of a telephone call to the undersigned attorney would be appreciated.

Respectfully submitted,

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